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STATE AFTER-CARE OF INFANTILE PARALYSIS CASES

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Last summer when New York was visited by the epidemic of infantile paralysis the question uppermost in all our minds was: What can be done to help this harvest of cripples?

This was a tremendous question and instantly an active campaign was put into effect by the state to prevent as much permanent crippling and deformity as possible. As four thousand cases were reported in fifty counties, besides Kings and Queens, the problem demanded much thought and a large expenditure of time and money.

All epidemic work in New York State is handled according to a certain routine, that is, when a case is suspected or reported the local health officer if in doubt of his diagnosis, calls upon a state diagnostician to confirm his diagnosis and a record of the case is sent to the office in Albany. State supervising nurses, familiar with epidemic work, are when needed assigned to the infected area; in some centres where there are many cases, more than one nurse is necessary to inspect quarantines, and again, where the cases are scattered, she will have charge of these in several counties.

The duty of each nurse on arrival in any town to which she has been assigned is first to report to the sanitary supervisor and obtain a list of all the cases in his district. She visits each case not adequately supervised and reports whether quarantine is efficient, noting unsatisfactory conditions.

Recognizing the gravity of the situation last summer, the state appointed nurses to visit poliomyelitis cases in many counties to see that quarantine was observed; to search out contacts and notify the proper officials of cases in distress. Somewhat later was commenced the campaign of after-care by advising the parents of the little victims to be patient, trust their physician and not resort to quackery, as the state would provide orthopaedic surgeons to hold clinics in their town and give them the best of advice. It was sometimes almost impossible to make anxious mothers believe that waiting was the best policy.

In 1914, Vermont had suffered from an epidemic of poliomyelitis and Dr. Robert W. Lovett of Boston was engaged by that state to examine the cases after the acute stage and to suggest treatment which the attending physician would carry out. Under Dr. Lovett's method

of treatment many cases were greatly helped and he was therefore engaged for the work in New York State.

As soon as the dates for the first clinics were determined, state nurses were sent ahead as advance agents to prepare the field for the workers and supply the material. The first duty of these nurses was to receive from the State Department of Health a list of all cases, with the names of their physicians. Each physician was visited and permission asked to call upon his patients and invite them to the clinic. Sometimes twenty patients would have almost as many doctors and



MUSCLE TESTERS AT WORK.

to visit these was more than a day's work and the telephone proved most useful. Then the patients were called upon; even if they lived many miles out of town, conveyances were hired and the journey accomplished. As a rule the response from the people was wonderful, especially while the weather was good, about 95 per cent of all cases attending on Long Island and in Westchester County, the places where the first clinics were held.

Having secured the patients for the clinics, a place in which they could be held must be found. A great variety of rooms for this purpose has been utilized, including an Elks' hall, a Presbyterian parsonage, an opera house, a church, a city hall, a fire house, a parlor of a

hotel and many hospitals. Everywhere the clinic was welcomed and each town tried its best to meet all needs, though a complete equipment of sheets, blankets, pillows and other requisites was provided by the state and accompanied the workers. Local physicians, nurses and social workers were always invited to attend the clinics and many responded. If at a distance from a hotel a noonday repast was often provided, and always a luncheon for the little patients and their parents who traveled long distances and often had to wait for hours.

Dr. Lovett and his staff usually arrived at 9 a.m. when the clinics were started. As each patient entered, accompanied by his father or mother, a nurse recorded the name and a brief history of the case on the first of a set of charts prepared for the purpose. The child was then undressed and every muscle carefully tested by muscle trainers to determine what degree of paralysis existed. All this was recorded and then Dr. Lovett or the surgeons assisting him examined the case, demonstrating the same to the doctors present. If over five years old the patient was taken to the muscle testing table where an apparatus was applied which registered in pounds and ounces the working strength of each muscle tested. Measurements for braces, corsets, collars and other appliances necessary to overcome the effects of the deformity were made. When the physician in charge of the case was not present, a letter was sent him advising what extent of paralysis existed and treatment was prescribed. When exercises were ordered, the chief muscle trainer carefully explained the same to the mother, giving her also a written list of the exercises with instructions.

The State Charities Aid Association provided transportation to and from clinics and also supplied braces, corsets, etc., for those unable to pay. A representative of the association was present at each clinic to attend to these details.

Dr. Lovett believes that a moderate proportion of last year's cases are not yet ready for treatment other than recumbency, warm saline baths, gentle massage, exercises, etc. His experience in Vermont convinced him that with very small children little can be done so soon after the acute stage. The wisest plan seems to be to let them alone until they are old enough to coöperate with exercises. It is hard to make parents realize that rest is of more value in these first months than any other treatment. Muscle training in his opinion constitutes the most important of early therapeutic measures.

To provide a corps of workers expert in muscle training and testing, the state sent a number of graduate nurses from various hospitals to Boston for training in Dr. Lovett's methods. This course included work in the out-patient clinics of an orthopaedic hospital; a series of

lectures and discussions on muscle training by Wilhelmine Wright of Boston, and a special course in anatomy by a leading professor. At the completion of this course, the state assigned the workers to duty in the clinics where they had six weeks practical work under the supervision and instruction of the surgeon-in-charge, after which they were assigned to follow-up work of cases.

To give in brief a summary of Dr. Lovett's methods we will quote from his book.¹

Infantile paralysis is not to be considered a paralysis in the sense of a complete loss of power but a weakening of the affected muscles. . . . In the convalescent phase which will carry us practically two years from the onset there is no question of any operation and our efforts are concerned with the restoration of muscular power and the prevention of deformities. . . . Many muscles are weakened and some are wholly paralyzed because of injury to certain nerve centers; weakened muscles may be strengthened by muscular exercise, and in addition to this, impulses sent from the brain to the muscle may be trained to find new paths. This is because the communications between the nerve centers and the connections between the nerve centers and muscles are very extensive and intricate and because most often not all the centers controlling one muscle are wiped out.

Of course it is too early to determine the complete results of this treatment but already those who have come to subsequent clinics show marked improvement when instructions have been followed.

The first clinic was held October 17, 1916, at White Plains, New York; up to January 20 seventy-two clinics had been held with an attendance of 1891 patients. After November 8 the force was divided into Units A and B, each unit consisting of an orthopaedic surgeon, an executive nurse, a chief muscle-trainer and four assistants, two of whom were nurses who later would be assigned to follow-up work on these cases. Every patient who has attended clinics, for whom exercises or any treatment has been prescribed, will be visited by one of these nurses, who have been stationed at Mineola, White Plains, Poughkeepsie, Middletown, Syracuse, Albany, Watertown and Ithaca. Subsequent clinics will follow, the initial round having been concluded at Utica, January 20.

Many pathetic and distressing cases were daily presented, many who despaired of ever being helped were sent away reassured and hopeful. Cases where the paralysis was due to former epidemics were brought to the clinics and often operations were suggested that would enable the cripples to lead useful lives.

¹ *Infantile Paralysis*. Lovett.